

Ilonka Aylward  
v.  
City of Charlotte  
and  
Charlotte-Mecklenburg Stormwater Services (a.k.a. “Charlotte Stormwater Services,”  
a.k.a. “Charlotte/Mecklenburg Storm Water,” a.k.a. “Charlotte Storm Water Services,”  
a.k.a. “City of Charlotte Storm Water Services”)  
and  
Armstrong Glen, P.C.  
and  
Joseph (“Josh”) H. Letourneau, P.E.

**Ilonka Aylward’s Complaint**

## **Exhibit 13**

**From:** Ilonka Aylward [ilonka.aylward@aylwardfamilylaw.com](mailto:ilonka.aylward@aylwardfamilylaw.com)   
**Subject:** Hinsdale Tinkerbell Stormwater Project Problems  
**Date:** June 27, 2019 at 5:51 PM  
**To:** Michael Davis [madavis@ci.charlotte.nc.us](mailto:madavis@ci.charlotte.nc.us), Desai, Kruti [kdesai@ci.charlotte.nc.us](mailto:kdesai@ci.charlotte.nc.us)  
**Cc:** Ilonka Aylward [ilonka.aylward@aylwardfamilylaw.com](mailto:ilonka.aylward@aylwardfamilylaw.com)

IA

Kruti, Mike,

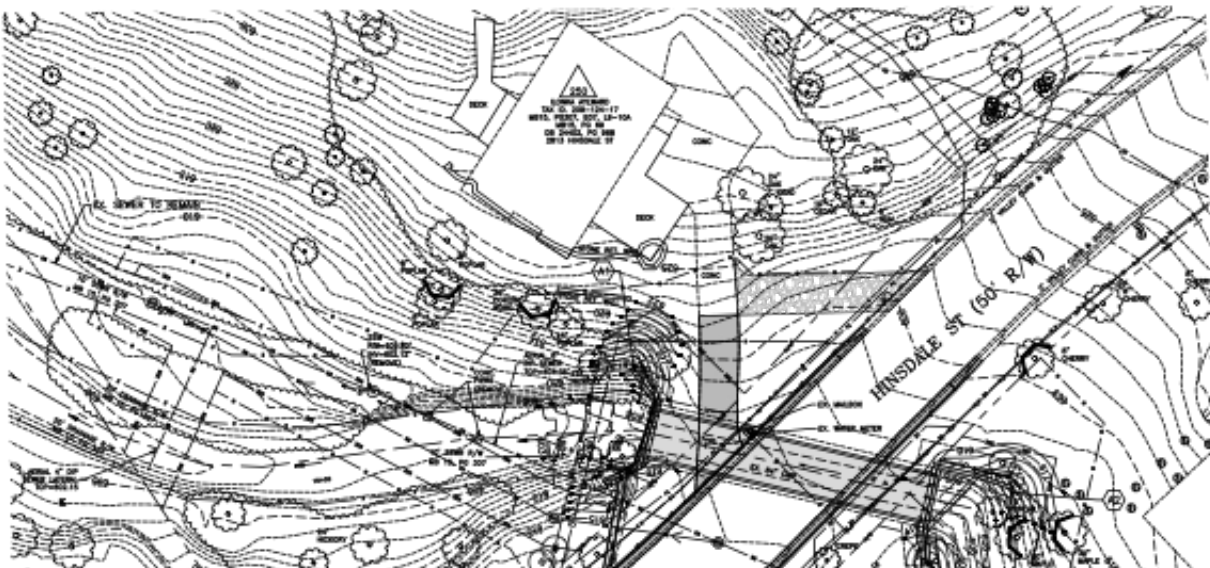
Please let me know if this email comes through.  
— Ilonka

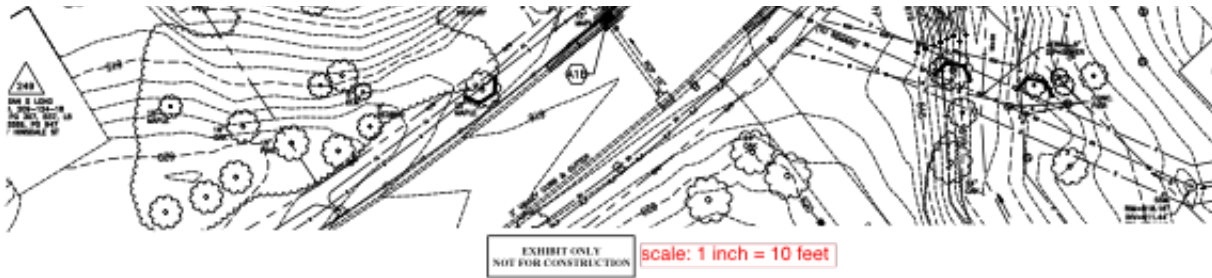
**Attach. 1** Current Stormwater construction design.  
My lot is 250

**Attach. 2** Diamond Engineering PLLC Opinion  
Letter June 2019

**Attach. 3** Diamond Engineering PLLC Opinion  
Letter December 2018

**Attach 3A** Diamond Engineering Letter to  
Stormwater explaining its 2018 redesign





Diamond Engineering, PLLC

June 17, 2019

Hlonka Aylward  
2813 Hinsdale St.  
Charlotte, NC 28210

Subject: Evaluation of Potential Impact to 2813 Hinsdale St. by a Proposed Charlotte Mecklenburg Storm Water Drainage Improvements Project

Dear Dr. Aylward,

This correspondence is to document the findings of a review of the proposed plans to replace the storm drainage culvert on Hinsdale Street, adjacent to your property. I have reviewed, in particular, the slope at the southwest corner of the culvert. The slope closest to your residence, is proposed to be 1.5:1. The Slopes at all the other corners of the culvert is proposed to be 2:1. A typical and maintainable maximum slope for soils in the piedmont of North Carolina is 2:1. Slopes steeper than 2:1 are subject to slope failure and erosion due to the inability to obtaining and maintain an adequate vegetative cover. This proposed unstable slope is uncomfortable close to your residence and it is my recommendation that a redesign in this area is warranted. Grading in this area will destroy the existing stable vegetation and structures and will subject the house foundation to blasting and vibration from moving construction equipment.

My recommendation is that the end of the wing wall be rotated toward the creek and away from your residence. This would reduce the cut, reduce the slope, and eliminate the risk to your residence. Because the creek is bending to the left in this location, angling the wingwall away from your residence will also protect the creek bank in this area. This proposed change shouldn't cost any additional money to construct and can be constructed below the 616 contour which will limit the danger to your house and reduce the city's easement cost.

You also indicated that the city contractor is planning on storing materials and equipment on your property during construction. The only possible location for this would be across the creek from your house on the triangular lot of your property bounded by the creek, the road, and your eastern property line. Using this area wouldn't cause a significant disruption to your residence or disturb an area that might erode and cause structural damage to your house. Please review my comments and let me know if you have any additional questions.

If you should have any questions, please contact me at (704) 922-0024.

  
Johnny H. Denton, PE, PLS  
Diamond Engineering, PLLC



Civil Engineering & Surveying  
Site & Subdivision Planning  
Erosion & Storm Water Control  
Water & Sewer Design  
Municipal Engineering

440 Old NC 277 Loop Road

Dallas, N.C. 28034

Phone: (704) 922-0024

December 6, 2018

Ilonka Aylward  
2813 Hinsdale St.  
Charlotte, NC 28210

Subject: Evaluation of Potential Impact to 2813 Hinsdale St. by a Proposed Charlotte Mecklenburg Storm Water Drainage Improvements Project

Dear Dr. Aylward,

This correspondence is to document the findings of a field inspection and evaluation of the impact of a proposed stormwater improvements project at your residential property at the above referenced address. After a review of the plans and an evaluation of the site conditions, I offer the following opinion. The plan, as it is currently proposed, poses substantial risk to the structural integrity of your residence, both during construction and in later years. Sewer manhole #2 on sheet U1, which is the closest to your residence, will be approximately 12' deep and will be constructed on a 24' high slope that exceeding 2:1 in slope. A 2:1 slope (a slope that drops 1' within 2' of travel) is the maximum slope that is typically considered stable. The steepness of this slope makes any construction in this area difficult, expensive, and subject to erosion and slope failure. This proposed manhole is within 24' of the corner of your foundation which is 12' above the proposed manhole location. Considering all these factors, the probability of soil settlement either during or after construction is significant.

Along with improving stream hydraulics, Charlotte-Mecklenburg Storm Water Services is attempting to better safeguard their sewer collection system by lowering the lines at the creek crossings below the creek bottom. This will require rock removal using either blasting or another nonconventional construction method which will also increases the probability of damaging your residence.

I offer the following recommendation which will eliminate the possibility of damaging your residence and in my opinion reduce construction cost associated of the sewer line construction. The sewer line currently zig-zags back and forth and crosses the creek in two locations (sheet U-1 and sheet U-6). Charlotte-Mecklenburg Storm Water Services should relay the sewer line on the northeast side of the creek from sheet U-6 up to and into the proposed manhole 4 on sheet U-1. The topography along the northeast side of the creek is flatter and lower and will allow for easier construction and reduced construction cost. This will eliminate both unnecessary creek crossings, secure the lines from potential washout or damage from floating debris, reduce construction cost, and eliminate the potential damage to your residence.

If you should have any questions, please contact me at (704) 922-0024.

  
Johnny H. Denton, PE, PLS  
Diamond Engineering, PLLC



Civil Engineering & Surveying  
Site & Subdivision Planning  
Erosion & Storm Water Control  
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3A. Diamond  
Engine...ne.pdf

## **TERRAIN:**

My house sits on the right bank of a small creek, on a very steep slope.

(EPA defines “steep slope” as 15 degrees; mine is 16 in parts, and 80 in parts, so I kid you not when I say “steep.”)

Bank erosion immediately under the house was graded “severe.”

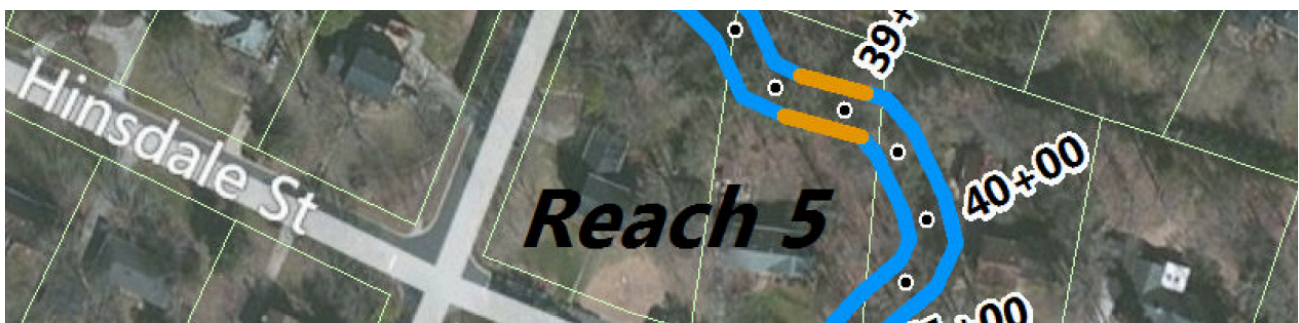
Charlotte Stormwater wants to: grade this steep, eroded slope; blast bedrock under it, vibrate it; store machinery and materials on it. I resist and offer alternative solution, which is cheaper, safer, and designed by Professional Engineer with municipal and hydrological expertise.

**Attach. 4** View of the slope where Stormwater wants to grade





**Attach. 5** Charlotte Stormwater's own pre-construction Channel Stabilization Report (Wildlands 2013) rated my slope as "severely eroded."





US Corps agrees with me that one of the erosion culprits is the position of Stormwater drain. Stormwater shoots from left bank into right (my house) bank. It cut a hole in right bank.

**Attach. 6** US Corps email to Project Manager John Keen suggesting that measures must be taken against erosion caused by the stormwater pipe.

**Attach. 6B, 6C** Photos of some eroded areas

John,

One other quick question and sorry to keep bugging you on this. Dr. Aylward sent me some more pictures and she has pointed out a little stormwater pipe that is directed towards the bank where she says some erosion has occurred (minor bank undercutting based on the picture). Looks like the stormwater pipe will be placed in relatively the same location post construction and at a 90 degree angle to the stream flow. We often ask that stormwater not come in a 90 degree angle to reduce potential erosion on the opposite bank. Again, I know that you are much earlier in the planning/designing stage that I would normally see a plan so this may get addressed as the process moves forward, but in order to address the concerns she has that are actually pertinent to regulatory, thought I'd go ahead and mention this and see if you have considered placing this pipe so it is not perpendicular to the stream or otherwise considered the potential impact of directing stormflow across the stream.

Thanks,

Crystal C. Amschler  
Project Manager  
Asheville Regulatory Field Office  
151 Patton Avenue, Room 208  
Asheville, NC 28403  
(828)-271-7980 Ext 4231



The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at:

I mention this problem, because design change proposed by Diamond Engineering Opinion Letter 2019 (rotating wing wall end ) helps this problem as well.











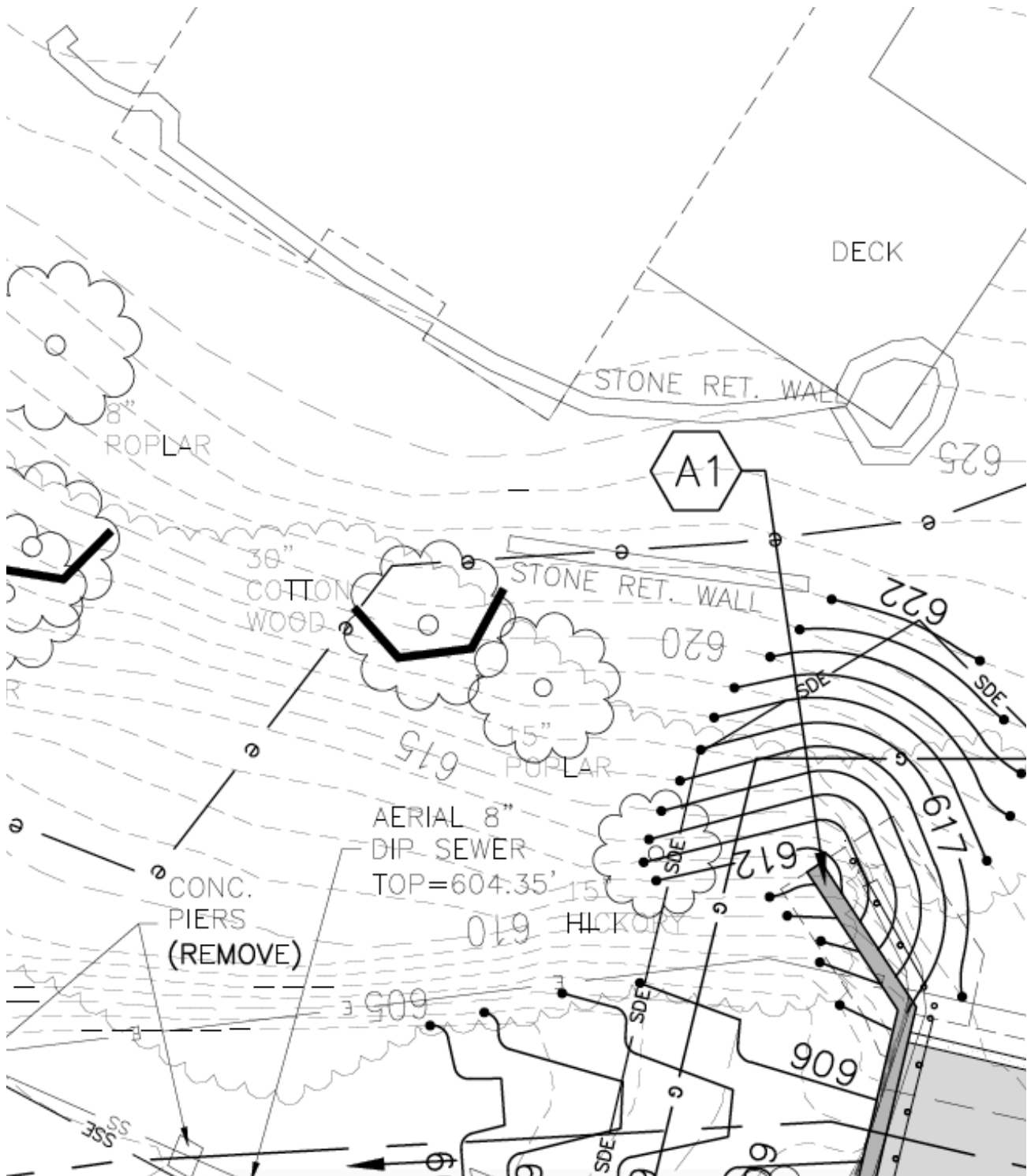
## **DESIGN DEFECTS OF STORMWATER PROJECT**

### **I. Non-Complaint, Unnecessary, Grading Will Compromise Steep Slope and Threaten Structural Integrity of the House**


Charlotte Stormwater wants to grade at least 16 vertical feet. This grading is not in compliance with *Charlotte Land Developmental Grading Standards Manual II(A)(10)*.

(at a minimum, 2:1 is not observed)

***Attach. 7*** Close up of proposed grading.







Diamond Engineering PLLC's Opinion Letter warns of structural damage to my house as a result of grading this "unstable slope," "subject to failure and erosion," "uncomfortably close to my house."

**(Attach. 2** Diamond Engineering Opinion Letter June 2019)

Importantly, Diamond Engineering PLLC Opinion Letter offers affordable and sustainable solution that will no cost any additional money:

Rotate the end of wing wall toward the creek;  
Store all the machinery *on my land!* but on the the left side of the creek.

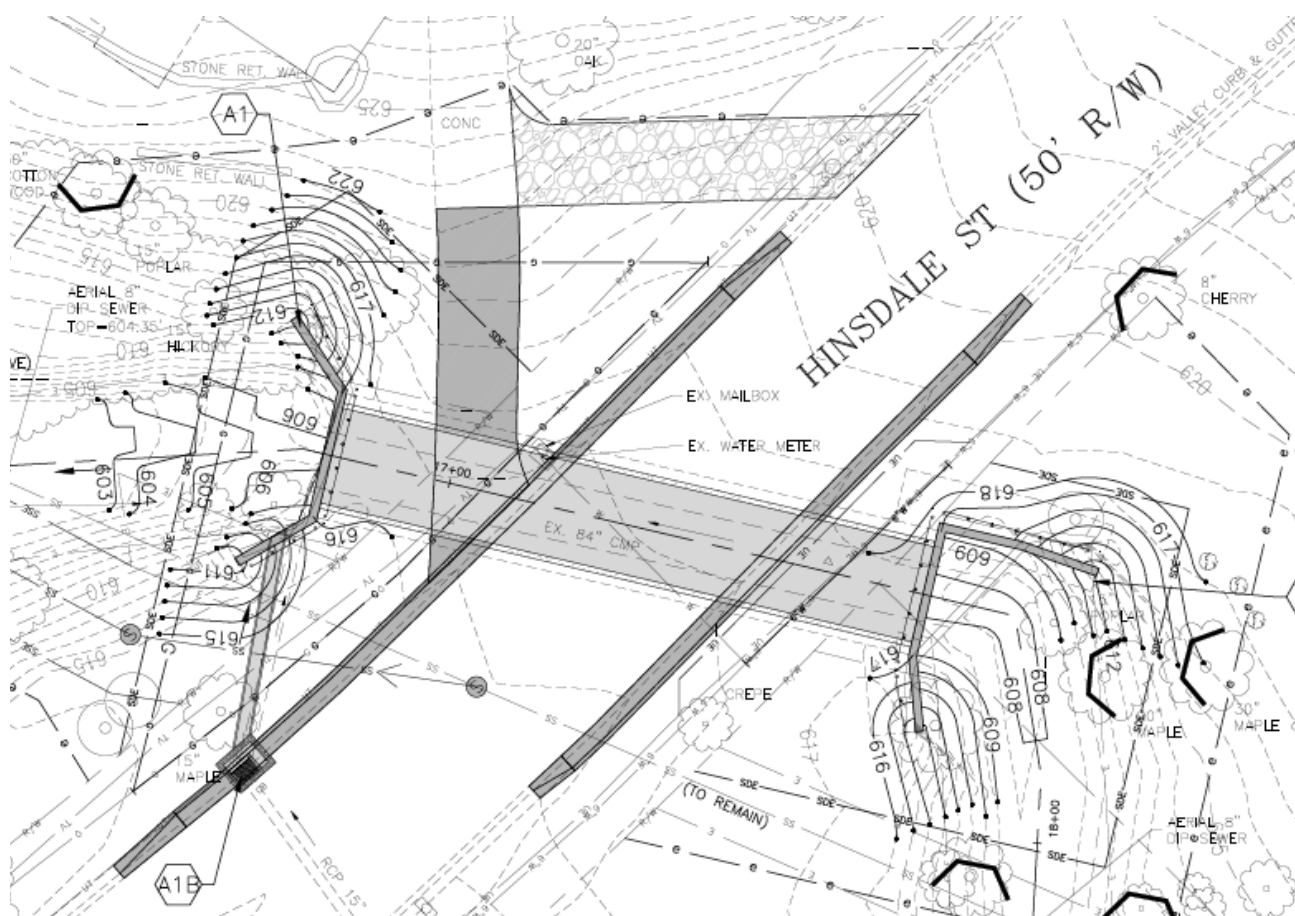
**(Attach. 2** Diamond Engineering Opinion Letter June 2019)

Rotating wing wall should protect against erosion caused by shooting stormwater.

Plus, City will even have to buy less of my land. Diamond Engineering opines that City will only need below contour 616, instead of all the way to the house at 625.

What's more, Stormwater uses this exact design on the other side of the culvert (see A2, across Hinsdale).

**Attach 8. (close up of stormwater design)**



## Negotiations fail:

Stormwater (by Mr. Keene and Mr. Lozner) resists re-designing my A1 to look like neighbor's A2 saying that "consultants charge money to re-draw" and also saying (untruthfully) that "permits would have to be re-obtained." In reality, Stormwater has not yet applied for any CWA permits, according to all three CWA issuing agents.

Stormwater (by Mr. Keene and Mr. Lozner) parried my concern for structural integrity of my property, simply saying that even in the worst case scenario, Stormwater is unconcerned because even if the house slides down the creek, "I'll never prove their fault in court."

## **II. Unnecessary Sewer Zig-Zag across the creek and Blasting Bedrock In the Creek Does not Pass CWA and Threatens Structural Integrity of My House**

Charlotte Stormwater proposes to blast bedrock in



the creek in order to bury sewer zig-zag across the creek.

U.S. Corps already expressed concerned with blasting and will requested justification.

**Attach. 9** E-mail from US Corps to Mr. Keene  
“I told “Mr. Keene that blasting has potential issues, including fracking and loss of stream flow, and we would require justification...”)

The other thing john mentioned was the need to potentially blast or cut through bedrock to bury a water line for the City. I told him that blasting has potential issues, including fracking and loss of stream flow, and we would require justification on why the utility line couldn't be aerial or otherwise installed without blasting or with less intrusive methods (directional boring??). just wanted to put that on everyone's radar as well. I assume that the utility line would be wrapped into a permit with the rest of this project correct?

Crystal C. Amschler  
Project Manager  
Asheville Regulatory Field Office  
151 Patton Avenue, Room 208  
Asheville, NC 28403  
(828)-271-7980 Ext 4231

As it happens, blasting the creek bedrock is unjustified, because sewer does not need to cross the creek in the first place.

Sewer starts *and* ends on the LEFT (relatively flat) side of the creek. Hip-hop is unnecessary.

Diamond Engineering PLLC explained this point

to Stormwater back in December 2018:

**Attach. 3** Diamond Engineering PLLC opinion letter December 2018

**Attach. 10** Email from Diamond Engineering PLLC to Mr. Keene, explaining the concept

This has a history.

In 2018, I was forced to bring in Diamond Engineering PLLC, to resist Stormwater's sewage design (By Armstrong Engineering and Mr. Keene) that can only be described as absurd.

In engineering terms,

Stormwater proposed building a new "sewer manhole ... approximately 12 feet deep constructed on a 24 foot high slope that exceeds 2:1 ... within 24 feet from the house foundation, which is (in turn) 12 feet above the manhole location."

**Attach. 2** Diamond Engineering LLC opinion letter December 2018

Essentially, Stormwater wanted to turn the sewer from its manhole on the left bank cut sewer into

from its manhole on the left bank, cut sewer into the cliff on right bank under my house, blasting out bedrock in the creek on the way, and dig in new manhole right under my house. Expensive, complicated, and certain threatening structural integrity of the house.

After consultation with Diamond Engineering, Stormwater (by Mr. Keene and Armstrong) amended its absurd design.

By existing design, sewer no longer cuts into the 24 foot high slope.

Nevertheless, the sewer still zig-zags across the creek, just a little lower downstream. Stormwater still insists on blasting the bedrock.

Like US Corps of Engineers, Diamond Engineering PLLC warns against detrimental effects of blasting. Importantly, Diamond Engineering PLLC proposes a simple solution.

**Attach 3.** Diamond Engineering Opinion Letter 2018

This solution  
(a) eliminates blasting,



(b) eliminates unnecessary crossing of sewage pipe, AND  
(c) “will allow for easier construction and reduced construction cost”.

How? By simply sending the sewer straight down left bank to connect to the existing manhole on the left bank.

Negotiations fail.

Why can't the sewer go down on a straight line?

I asked repeatedly.

Mr. Keene explained that Stormwater had no *engineering* objection to this simple plan. However, straight line sewer would partially go on the neighbor's land; and that particular neighbor is somebody's friend.

I appreciate the importance of friendship. And yet, I resist blasting of bedrock this close to my house, when the engineer warns against it.

My proposal: If that neighbor is not a friend to the whole Stormwater and the whole City, the sewer should run straight.

In the unlikely event that the neighbor is a friend to the whole City, I propose a compromise.

Perhaps, the sewage could maybe run along the border on my left bank of the creek, on my land. Sewer will still have to cross the water twice, but we will avoid the blasting, because there is no bedrock at the point of crossing. The stream is very shallow and narrow at that point.

Stormwater (by Mr. Keene and Mr Lozner) do not want to discuss this. Does the City?

### **III. Driveway**

As currently designed, temporary driveway makes a 90 degree turn on a high slope, into a high-er slope.

There is no safe radius; emergency vehicles will not be able to reach the house, and definitely not be able to back up. Additionally, field of vision on the first leg is obstructed by vegetation.

A driver which misses this sharp 90 degree turn is aimed straight for the 20 foot drop on the creek bedrock.

I pointed out to Mr. Keene and Mr. Lozner that this drop may be fatal, but they were unconcerned.

I bring temporary driveway to your attention now, as one of the issues to be resolved, but grading and sewage are probably more pressing.

## **POSTURE OF NEGOTIATIONS**

My lot was scheduled for City Council condemnation approval proceeding in late 2018. Condemnation request was withdrawn by Stormwater after I brought in Diamond Engineering to evaluate the absurd sewage plan.  
**See Attach. 3 and 3A**

At the moment, Stormwater (by Erin Shanaberger) represents to US Corps, DWR, NCDEQ) that it is developing and revising construction plans.

In contrast, Stormwater served me with attached plans and demanded that I sell the easement "as is."



I understand that you might say: “sell easement now, refine designs later.”

However, that does not work in my case because the shape and size of easement is directly dictated by the design.

Note that Diamond Engineering Opinion letter states that all construction can be done below contour 616.

In contrast, Stormwater seeks easement all the way up to contour 625.

This is a concern for me because Stormwater (by Mr. Keene and Mr. Lozner) explained that contractor will grade my steep slope by throwing the grading material from the very top of the slope. (The only other way is by helicopter, they joked.)

Mr. Keene also informed me that contractor may store supplies and equipment on the steep slope in front of my house to the right of the creek — a plan which will cause erosion and structural damage, Diamond Engineering warns.

For these reasons, I seek to assure that safe design is in place and that this construction will be

is in place and that this construction will be properly permitted before I am forced to sell the easement.

I am not an engineer, so if I am unclear, please let me know.

Please respond by email [draylward@carolina.rr.com](mailto:draylward@carolina.rr.com) or by phone to 704.334.5902

Ilonka